

This application is a Continuation application of U.S. Application No. 10/424,105, filed April 28, 2003, ^{now Patent No. 6,855,642} which is a Continuation application of U.S. Serial No. 09/939,600, filed August 28, 2001, now U.S. Patent No. 6,596,650, issued July 22, 2003, which is a Continuation application of U.S. Serial No. 09/494,036, filed January 31, 2000, now U.S. Patent No. 6,518,201, issued February 11, 2003, which is a Continuation application of U.S. Serial No 09/380,646, filed September 7, 1999, now U.S. Patent No. 6,239,041, issued May 29, 2001, which is an application filed under 35 USC 371 of PCT/JP98/00892, filed March 4, 1998. The contents of No. 09/380,646 are incorporated herein by reference in their entirety.

Technical Field

This invention relates to a method for fabricating semiconductor integrated circuit devices including semiconductor devices, and more particularly, to a technique useful for application to the formation of gate oxide films (insulating films) such as of MOSFET (metal oxide semiconductor field effect transistor)

Background Art

In the initial stage of semiconductor industries, bubbling was in wide use where a carrier gas such as oxygen or the like was passed through water in a bubbler. Although this technique was advantageous in that a wide range of a moisture content could be covered, a problem on pollution could not be avoided, and thus, the technique is rarely used at present. Accordingly, an oxygen and hydrogen combustion method, i.e. a pyrogenic system, has been widespread in order to avoid the disadvantage of the bubbler.

(Disclosure of Prior Art Literature, etc.)

With regard to an improvement in thermal oxidation and a moisture generation method thereto, to which the invention is directed, the following prior art techniques

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illustrating a method for fabricating a semiconductor integrated circuit device according to embodiment 1 of the invention.

Fig. 7 is a sectional view of an essential part illustrating a method for fabricating a semiconductor integrated circuit device according to embodiment 1 of the invention.

Fig. 8 is a sectional view of an essential part illustrating a method for fabricating a semiconductor integrated circuit device according to embodiment 1 of the invention.

Fig. 9 is a schematic view showing an oxide film forming apparatus of the single wafer type used to form a gate oxide film.

Fig. 10 is a sectional view of an essential part illustrating a method for fabricating a semiconductor integrated circuit device according to embodiment 1 of the invention.

Fig. 11(a) is a schematic plan view showing an example of an arrangement of an oxide film forming chamber, and (b) is a sectional view taken along line B-B' of (a).

Fig. 12(a) is a schematic plan view showing other example an arrangement of an oxide film forming chamber, and (b) is a sectional view taken along line B-B' of (a).

Fig. 13 is a schematic view showing a moisture generator of a catalyst type connected to an oxide film